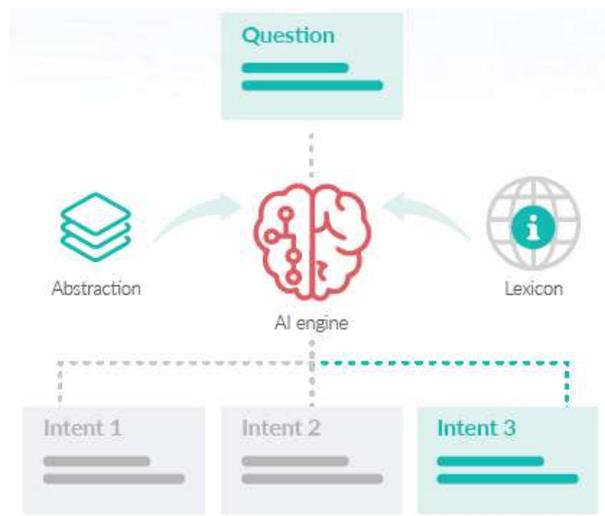# inbenta

## COMPARATIVE ANALYSIS

# Inbenta's NLP Technology Surpasses IBM Watson, Microsoft LUIS, Google Dialogflow.

## Understanding how chatbots work

Most of today's chatbots rely on machine learning to match intents to customer questions, and require large quantities of training utterances over many months of preparation. This type of brute-force machine learning fails to capture and process natural human language, which can produce virtually infinite utterances for the one question.

Many chatbot providers claim to be sufficient in natural language processing despite relying on utterances and lacking the most basic natural language capabilities, severely impacting the end user experience.



## Inbenta's advantage

Inbenta offers a unique blend of artificial intelligence and computational linguistics to master natural language, allowing our customers to launch an intelligent chatbot with zero training. This means that our chatbot can begin processing high-complexity queries from Day One

## Experiment

| Intent # | Card fees Utterance |
|---|---|
| 1 | is it very expensive to use the card? |
| 2 | what can you tell me about card fees? |
| 3 | tell me more about the fees associated with this card |
| 4 | what are the fees? |
| 5 | how much are the fees on this card? |
| 6 | do these card have fees? |
| 7 | what sort of fees do you have on your credit cards |
| 8 | what are the fees on this card |
| 9 | what fees does this card have |
| 10 | what are the charges associated with these specific credit cards? |
| 11 | how much will i have to pay if i sign up for this card i.e. annual fees etc.? |
| 12 | how much will i wind up spending on surcharges if i decide to apply for this credit card? |
| 13 | will i get charged a crazy amount when I have this card? |
| 14 | does this credit card have a lot of fees |
| 15 | will there be a lot of charges for owning this card? |
| 16 | what charges are associated with this card? |
| 17 | are there any hidden charges with this card? |
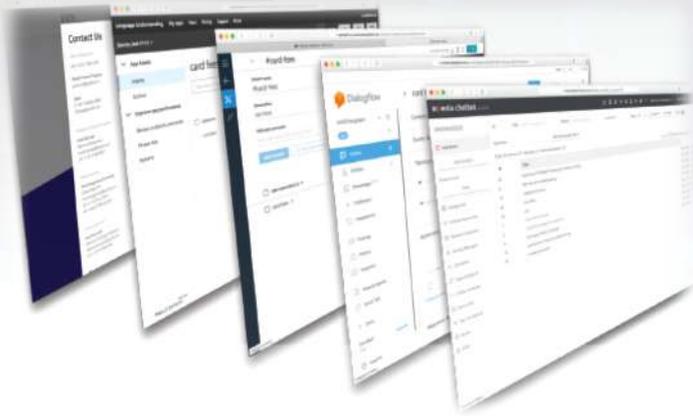
# inbenta

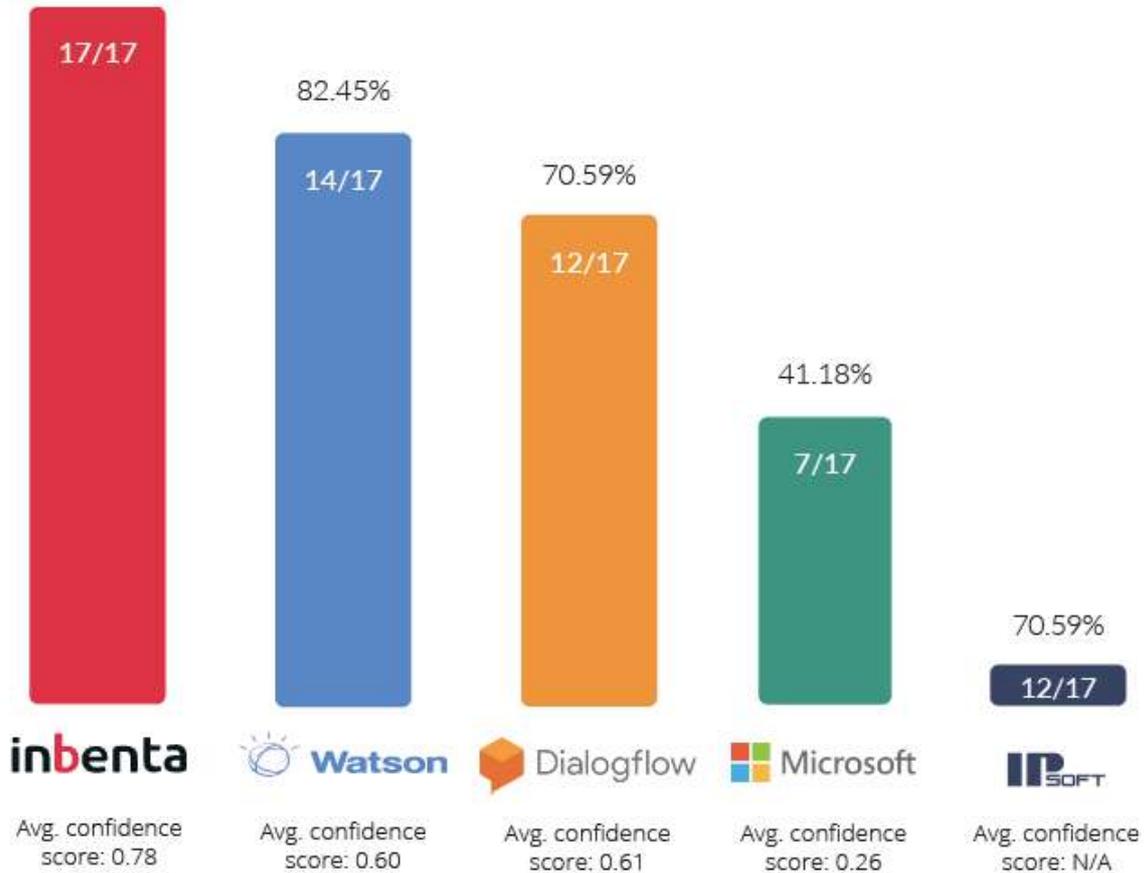## Testing the efficiency of market-leading chatbots

We built five basic chatbots with **IBM Watson**, **Google DialogFlow**, **Microsoft LUIS**, **IPSoft**, and **Inbenta**. Each of the respective bots were updated with the same intent: **card fees**.

Without using any training data beforehand, we asked each chatbot 17 questions based on the same intent.

(See table on reverse for the actual utterances.)

---

## Results

✅ Inbenta out-performed all other chatbot providers

✅ Inbenta was the only chatbot with a 100% answer success rate with zero training

✅ Our chatbot answered with 60% more confidence than other bots

| inbenta | Watson | Dialogflow | Microsoft | IPSoft |
|---------|--------|------------|-----------|--------|
| 17/17 | 82.45%<br>14/17 | 70.59%<br>12/17 | 41.18%<br>7/17 | 70.59%<br>12/17 |
| Avg. confidence score: 0.78 | Avg. confidence score: 0.60 | Avg. confidence score: 0.61 | Avg. confidence score: 0.26 | Avg. confidence score: N/A |

# inbenta

## COMPARATIVE ANALYSIS

# Main Chatbot Features, IBM Watson, DialogFlow & Inbenta

Below some features from IBM Watson/ DialogFlow/ Inbenta compared. Most importantly DialogFlow lacks a true Chatbot Engine (thus some dialog manager is still needed) so in some cases comparison is somehow difficult.

| Features | IBM Watson | Dialogflow | Inbenta |
|---|---|---|---|
| APIs | Yes | Yes | Yes |
| SDK configurator | Yes | Yes | Yes |
| NPL | Yes | No | Yes |
| ASR(STT) | Yes | Yes | No |
| TTS | Yes | Yes | Yes |
| Machine Learning | Yes | Yes | Yes |
| Languages Supported | 13 languages | Over 30 languages | Over 30 languages* |
| Chatbot Debug | No | No | Yes |
| Dialog Manager | No | No | Yes |
| Content editor | Yes | Yes (beta) | Yes |
| Variables & Entities | Yes | Yes | Yes |
| Intent detection | Yes | Yes | Yes |
| Transactional Intelligence | Yes | Yes | Yes |
| Context Awareness "Memory" | Yes | Yes | Yes |
| Automation with Webhooks | Yes | No | Yes |
| AIML | Yes | Yes | Yes |
| Chat connector | Yes | Yes | Yes (propio) |
| 3D avatar | – | – | Yes |
| Federated Bot | No | No | Yes |
| Semantic Cluster | No | No | Yes |
| Language support | EN | EN | EN/ES/FR/IT/PT/DE/JP |
| Server Ubication | US | US | US/Europe |

*Inbenta offers additional languages as catalan, basque or galician that the rest of the companies do not offer.*
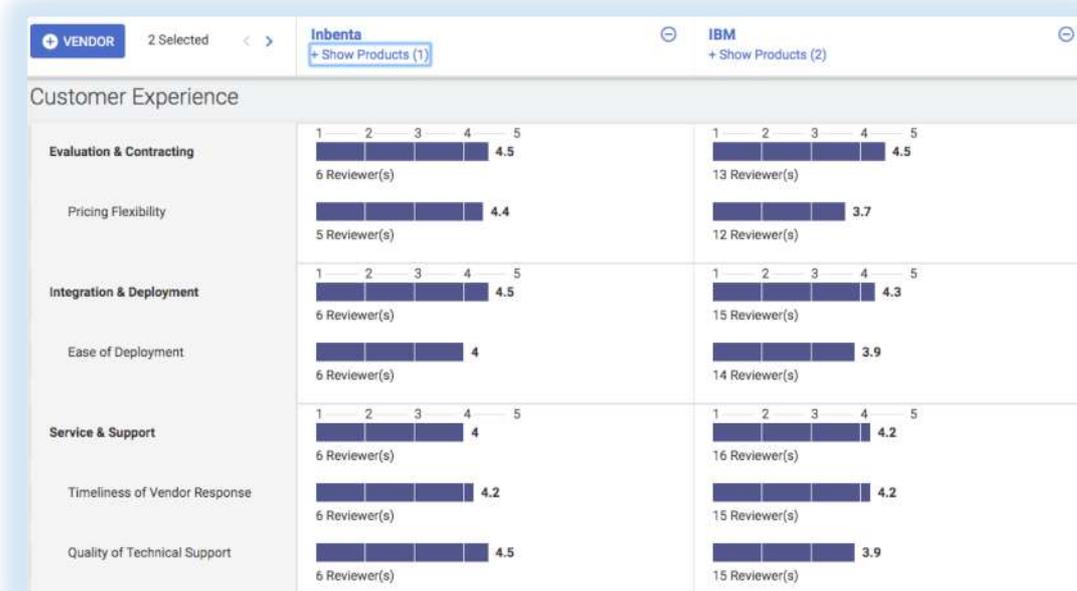
# inbenta

## RATINGS ANALYSIS COMPARISON

## IBM Watson, Inbenta & Dialogflow
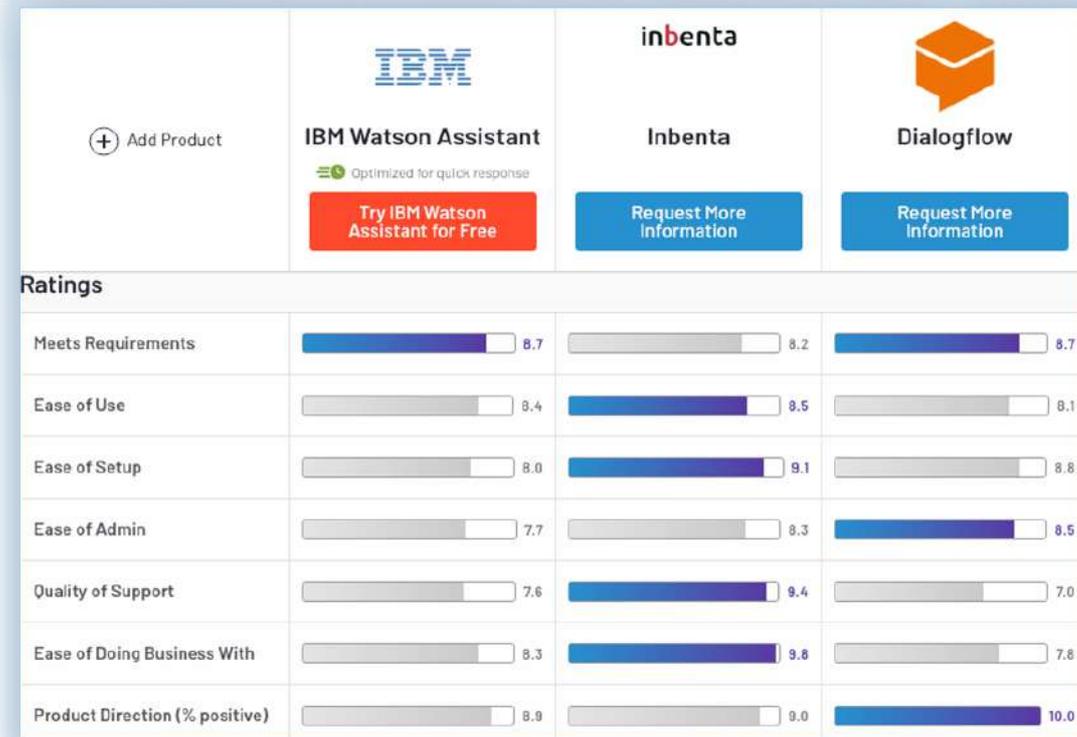


*Source*: *G2 Inc. – Business Software and Services Reviews. (*www.g2.com*).*



*Source*: *Gartner Inc – World's leading research and advisory Company (*www.gartner.com*).*